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**Pell et al.**

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(54) **USE OF TRANSCRANIAL MAGNETIC STIMULATION TO MODULATE PERMEABILITY OF THE BLOOD-BRAIN BARRIER**

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(52) **U.S. Cl.**

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See application file for complete search history.

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(57) **ABSTRACT**

Transcranial magnetic stimulation (TMS) is used to modulate permeability of the blood brain barrier in a transient, safe and non-invasive manner. A conventional or deep TMS coil may be placed on a head in a vicinity of a tumor, for example. A series of magnetic pulses is provided to the brain with a tailored stimulation protocol. In one of many possible clinical applications, a pharmaceutical substance may be introduced during a time frame before, during or after providing the magnetic pulses to treat a tumor in the brain.

**20 Claims, 6 Drawing Sheets**

